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EXAMINER	
SMITH, JOSHUA Y	

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2419	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Docketing.US@motorola.com

Office Action Summary	Application No.	Applicant(s)	
	10/530,540	PETRESCU ET AL.	
	Examiner	Art Unit	
	JOSHUA SMITH	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 January 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,12,13 and 15-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10, 12, 13 and 15-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/15/2009 has been entered.

- **Claims 1-10, 12, 13 and 15-20 are pending.**
- **Claims 11, 14, 21 and 22 are cancelled.**
- **Claims 1-10, 12, 13 and 15-20 stand rejected.**

Claim Objections

Claim 7 is objected to because of the following informalities: Claim 7 states "a means for analyzing said message to determine a route to deliver **data one** or more of to said mobile **node** and from said mobile node" (emphasis added by examiner), where it appears a word should be inserted between the words "data" and "one", such as the word ***to***. In addition, the excerpt "one or more of to said mobile node" requires the plural ***nodes***. Appropriate correction is required.

Claim 13 is objected to because of the following informalities: a division sign "÷" is appended to the word "by", and it appears to be a typographical error. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7-10, 12, 13 and 15-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 states "a means for analyzing said message to determine **a route to deliver data one or more of to said mobile node and from said mobile node**" (emphasis added by examiner). This is indefinite since it is not possible to deliver data ***from*** a mobile node, since data can only be delivered to a node. Examiner will treat the above excerpt to indicate *a means for analyzing said message to determine a route to deliver data to one or more of to said mobile nodes.*

Claims 8-10, 12, 13 and 15-17 are rejected through dependence from Claim 7.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2, 4-6, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over La Porta et al. (Document Number: EP 1 011 241 A1) in view of Immonen et al. (Patent No.: US 7,006,472 B1), Jang et al. (Pub. No.: US 2001/0043571 A1), Prasad et al. (Patent No.: US 7,054,328 B2), Heller (Patent No.: US 7,139,833 B2), and Hennessey et al. (Patent No.: US 7,398,301 B2), hereafter respectively referred to as La Porta, Immonen, Jang, Prasad, Heller, and Hennessey.

In regards to Claims 1 and 6, La Porta teaches in column 5, lines 43-48 and 51-54, Mobile IP wireless access for Internet Protocol (IP)-based network of mobile devices (supporting mobility in an Internet Protocol (IP)-based data network).

La Porta also teaches in column 16, lines 20-31, a path setup message that is sent and initiated by a mobile device that is used to update routing table entries for selected routers, where, in column 18, lines 16-18, and in FIG. 9, page 33, a path setup message contains a mobile device IP address field (item 314, FIG. 9) that is used to

inform a receiving router of the current IP address assigned for a mobile device within a domain (generating a first message at a mobile node, wherein the message contains an address capable of use for route maintenance to/from a mobile device, and a mobile node transmitting a generated message to a first access node).

La Porta also teaches in column 35, lines 1-8, 26-31, and 46-53, and in FIG. 17, page 42, a base station item BS11 receives a path setup message from a mobile device (item 114, FIG. 17) and forwards the message so that it is received by a domain root router (item 360, FIG. 17), which, in column 12, lines 28-34, a DHCP server may be implemented within a root router (an access node forwarding generated message to a dynamic host configuration (DHCP) Server, Access router).

La Porta also teaches in column 35, line 57 to column 36, line 17, a domain root router processes the setup message and adds a routing table entry corresponding to a mobile device for forwarding packets destined to the mobile device (DHCP server analyzing message to determine a route to deliver data to a mobile node).

La Porta also teaches in column 35, lines 4-26, upon receiving a path setup message, a base station creates a routing entry for routing packets for delivery to a mobile device (an access node analyzing a message to determine a route to deliver data to a mobile node).

La Porta teaches in column 34, lines 41-43 and 54-55, and in FIG. 17, page 42, a mobile device handoff from one base station to another base station, which causes a mobile device to generate and transmit a setup message and routers to forward a path setup message for each handoff of the mobile device, as outlined in column 35, line 1 to

column 36, line 25, and discussed above in the rejection of Claim 1 (repeating steps of generating, transmitting and forwarding of a second message when mobile node attaches to a second access node, and analyzing second message at DHCP server).

La Porta also teaches in column 16, lines 34-38 and 43-46, a path setup message sent by a base station to a root router and intermediate routers to re-fresh routing table entries for those selected routers which are utilized for packet transport from the root router to the base station (access node triggering one or more route update messages to a number of network elements between the access node and DHCP server, intermediate router).

La Porta fails to teach stateful IPv6 autoconfiguration.

Immonen teaches in column 31, lines 25-28, acquiring an Ipv6 address involves a stateful address autoconfiguration, i.e. DHCPv6 (stateful IPv6 autoconfiguration). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Immonen with the invention of La Porta since Immonen shows a system specifically implementing stateful address autoconfiguration for assigning Ipv6 addresses, and can be incorporated into the method of La Porta to update the method of La Porta so that it is compatible with the emerging Ipv6 and allows the DHCP components of La Porta to utilize DHCPv6.

La Porta fails to teach an access node adds an IP address of an access node to a route maintenance message.

Jang teaches in paragraph [0115], a network device (an access node) parses a packet header and payload of Q.931/H.245 control (i.e. call setup) streams (route

maintenance message) and substitutes non-routable endpoint source and IP addresses and port numbers with its own globally unique H.323 proxy IP address (an IP address of an access node) (an access node adds an IP address of an access node to a route maintenance message). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Jang with the invention of La Porta since Jang provides a method where a network device can substitute its address to a packet, allowing a base station in the method of La Porta to be able to identify itself in a message it forwards from a mobile device and allow a root router to store or process this information where needed in updating routing table entries.

La Porta fails to teach a route update message from a server to a number of network elements between an access node and a server in an IP based data network.

Prasad teaches in column 7, lines 60-63, and in FIG. 9, a centralized server sending update messages to update IP routing tables of Signal Transfer Points (STP), ehere an IP routing table 220 (FIG. 9) within each STP 20A-20D (FIG. 9) connected to an IP network 110 (FIG. 9) is then replaced with data received from an update message transmitted by a centralized server 710 (FIG. 9) over an IP link 700A-D, and where one of the STP's 20A-20D (FIG. 9) (a network element) is located between the centralized server 710 (FIG. 9) (a server in an IP based data network) and each Local Switch (FIG. 9) (an access server) (a route update message from a server to a number of network elements between an access node and a server in an IP based data network). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Prasad with the invention of La Porta since Prasad shows that

a server can update routing tables of intermediate network nodes, allowing the method of La Porta to have a root node that can update table entries of routers when it detects changes in a domain if a base station does not detect a change, or allows a user to access the root node and manually update routing tables of routers through the root node of a domain.

La Porta fails to teach a repeating of steps of generating, transmitting and forwarding for a second message that confirms an IP address of a mobile node when a mobile node attaches to a second access node.

Heller teaches in column 3, line 60 to column 4, lines 3, an MN (mobile node) detects a BS and sends normal link layer messages to a BS (base station) identifying itself (steps of generating, transmitting, and forwarding for an IP message that confirms an IP address of a mobile node), a PMN (proxy mobile node) (an access node) within a BS (base station) retrieves Mobile IP information from a database based on the identity of the MN, this information includes an IP address for each of the MN and other network elements needed to perform mobile IP registration, and the PMN sends a registration request to the home agent (HA) on behalf of the MN (an access node substitutes its address in a message), and a network further comprises a new base station (BS) and a new foreign agent (FA) provided at a new BS, and a new PMN (proxy mobile node) (a second access node) is provided at a new BS (base station), and if a MN (mobile node) detects a new BS, it first sends normal link layer messages to the new BS identifying itself (repeating steps of generating, transmitting, and forwarding for a second IP message that confirms an IP address of a mobile node when a mobile node attaches to

a second access node), and the new PMN within the new BS retrieves Mobile IP information from a data based on identity of the MN, where this information includes an IP address for each of the MN and other network elements needed to perform a new mobile IP registration, and the new PMN send a registration request to a new FA on behalf of the MN (a second access node substitutes its address in a second message) (repeating steps of generating, transmitting and forwarding for a second message that confirms an IP address of a mobile node when a mobile node attaches to a second access node). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Heller with the invention of La Porta since Heller provides a system in which a mobile node can maintain a Mobile IP address even after moving between base stations (see Heller, column 2, lines 14-19), reducing overhead that is associated with allocating new IP addresses and reducing the processing burden of a mobile node, and one of ordinary skill in the art at the time of the invention would appreciate the advantage of maintaining an IP address in a network as a mobile devices moves between base stations in that it reduces the processing complexity of a mobile device and allows lower cost user devices and requires less overhead between a network and a user device as handoff occurs.

La Porta fails to teach a message from a node and a server are triggered substantially simultaneously.

Hennessey teaches in column 3, lines 50-56, if a candidate server from a list of candidate servers and a client are both behind firewalls, a directory server sends requests to a candidate server and to a client which cause the candidate server and the

client to simultaneously send messages to each other through their respective firewalls to initiate a communications session between the candidate server and the client (a message from a node and a server are triggered substantially simultaneously). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Hennessey with the invention of La Porta since Hennessey provides a system that facilitates a distributed delivery of content across a network without the problems associated with existing distributed content delivery networks (see Hennessey, column 2, lines 1-11), which can be introduced into the system of La Porta to efficiently distribute content through domains in the system of La Porta and to ensure content is transferred quickly to and through domains to ensure they arrive at base stations promptly for transmission to wireless users in the system of La Porta.

In regards to Claim 2, La Porta teaches in column 36, lines 2-17, a root router, after receiving and processing a setup message that it is different from an earlier setup message, will update an entry associated with a mobile device (analyzing second message at DHCP Server to determine an address used for route maintenance in a second message is inconsistent with a address analysed in a first message).

La Porta fails to teach stateful IPv6 autoconfiguration, and triggering a route update message based on a determination.

Immonen teaches in column 31, lines 25-28, acquiring an Ipv6 address involves a stateful address autoconfiguration, i.e. DHCPv6 (stateful IPv6 autoconfiguration). It would have been obvious to one of ordinary skill in the art at the time of the invention to

combine the invention of Immonen with the invention of La Porta since Immonen shows a system specifically implementing stateful address autoconfiguration for assigning Ipv6 addresses, and can be incorporated into the method of La Porta to update the method of La Porta so that it is compatible with the emerging Ipv6 and allows the DHCP components of La Porta to utilize DHCPv6.

Li teaches in column 6, lines 45-49, an event triggers transmission of a database update packet by a node (triggering a transmission of a route update message based on a determination). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Li with the invention of La Porta since Li shows an apparatus that transmits an update packet when an event occurs, allowing a device in the method of La Porta to send an update packet to other devices if forwarding a setup message alone does not update a sufficient number of devices in a domain, or if a user wants devices outside the devices that receive a setup message to also be updated with the same information.

In regards to Claim 4, as discussed in the rejection of Claim 1, La Porta in view of Immonen teaches stateful IPv6 autoconfiguration, a first IP message, and, as discussed in the rejection of Claim 2, La Porta teaches a second IP message.

La Porta fails to teach stateful autoconfiguration and a DHCPv6 "CONFIRM" message.

Immonen further teaches in column 23, lines 52-53, a confirmation message, and in column 31, lines 25-28, DHCPv6 (DHCPv6 "CONFIRM" message). It would have

been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Immonen with the invention of La Porta since Immonen shows a system specifically implementing stateful address autoconfiguration for assigning Ipv6 addresses, and can be incorporated into the method of La Porta to update the method of La Porta so that it is compatible with the emerging Ipv6 and allows the DHCP components of La Porta to utilize DHCPv6.

In regards to Claim 5, as discussed in the rejection of Claim 1, La Porta teaches address information used for route maintenance and triggering a protocol. La Porta further teaches a distance-vector routing protocol, routing information protocol (RIP).

La Porta teaches in column 23, lines 24-28, messages are routed within a domain utilizing routing entries created by conventional routing protocols, such as Routing Information Protocol (RIP) (address information based on triggered routing information protocol (RIP)).

In regards to Claims 19 and 20, La Porta teaches in column 15, lines 7-14, processing and memory resources at each router for implementing forwarding algorithms and other router functions (a storage medium storing processor-implementable instructions, and an apparatus adapted to perform method steps).

Claims 3 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over La Porta in view of Immonen, Jang, Prasad, Heller, Hennessey, and further in view of Shitama (Patent No.: US 7,257,104 B2), hereafter referred to as Shitama.

In regards to Claim 3, as discussed in the rejection of Claim 1, La Porta teaches a number of network elements between a DHCP Server and an access node and address information for route maintenance to a mobile node, and, as discussed in the rejection of Claim 2, La Porta in view of Li teaches a first access node and second access node and transmitting in response to a determination.

La Porta fails to teach a deletion message that instructs in deleting obsolete information.

Shitama teaches in column 5, lines 37-44, a routing update message that may cause a router to delete an entry for a mobile node in a routing table when a mobile node moves between subnetworks in a domain or different domains (a deletion message that instructs in deleting obsolete information). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Shitama with the invention of La Porta since Shitama shows a system where a node can send a deletion message to a router to delete an entry, and can allow a root router in the method of La Porta to delete entries in routers if they have become obsolete and a setup message failed to reach the routers.

In regards to Claim 18, as discussed in the rejection of Claim 3, La Porta in view of Immonen, Jang, Prasad, Li, and Shitama teaches a communication message comprises route deletion instructions generated.

La Porta fails to teach an IPv6 message.

Immonen teaches in column 21, lines 16-19, IPv6 packets (IPv6 messages). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Immonen with the invention of La Porta since Immonen shows a system specifically implementing stateful address autoconfiguration for assigning Ipv6 addresses, and can be incorporated into the method of La Porta to update the method of La Porta so that it is compatible with the emerging Ipv6 and allows the DHCP components of La Porta to utilize DHCPv6.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over La Porta in view of Hennessey, and Li (Patent No.: US 6,385,174 B1) and Templin (Pub. No.: US 2001/0040895 A1), hereafter respectively referred to as Li and Templin.

In regards to Claim 7, La Porta teaches in column 16, lines 20-31, a path setup message that is sent and initiated by a mobile device that is used to update routing table entries for selected routers, where, in column 18, lines 16-18, and in FIG. 9, page 33, a path setup message contains a mobile device IP address field (item 314, FIG. 9) that is used to inform a receiving router of the current IP address assigned for a mobile device within a domain (generate a first message at a mobile node, wherein a message contains an address capable of use for route maintenance to and from a mobile node).

La Porta teaches in column 5, lines 43-48 and 51-54, Mobile IP wireless access for Internet Protocol (IP)-based network of mobile devices, and, in column 16, lines 20-31, a path setup message that is sent and initiated by a mobile device that is used to update routing table entries for selected routers, where, in column 18, lines 16-18, and in FIG. 9, page 33, a path setup message contains a mobile device IP address field (item 314, FIG. 9) that is used to inform a receiving router of the current IP address assigned for a mobile device within a domain (means for receiving a message from a mobile node that contains an IP address of a mobile node for use in route maintenance to deliver data to a mobile node).

La Porta also teaches in column 15, lines 7-8 and 21-25, routers include base stations and routers each include a processor, and, in column 35, lines 4-26, upon receiving a path setup message, a base station creates a routing entry for routing packets for delivery to a mobile device (means for analyzing a message to determine a route to deliver data to a mobile node).

La Porta also teaches in column 16, lines 34-38 and 43-46, a path setup message sent by a base station to a root router and intermediate routers to re-fresh routing table entries for those selected routers which are utilized for packet transport from the root router to the base station, where, in column 12, lines 28-34, a DHCP server may be implemented within a root router (a means for triggering a transmission of a route update message from an access node to a number of network elements between an access node and a DHCP server).

La Porta fails to teach a message from a node and a server are triggered substantially simultaneously.

Hennessey teaches in column 3, lines 50-56, if a candidate server from a list of candidate servers and a client are both behind firewalls, a directory server sends requests to a candidate server and to a client which cause the candidate server and the client to simultaneously send messages to each other through their respective firewalls to initiate a communications session between the candidate server and the client (a message from a server, and a message from a node and a server are triggered substantially simultaneously). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Hennessey with the invention of La Porta since Hennessey provides a system that facilitates a distributed delivery of content across a network without the problems associated with existing distributed content delivery networks (see Hennessey, column 2, lines 1-11), which can be introduced into the system of La Porta to efficiently distribute content through domains in the system of La Porta and to ensure content is transferred quickly to and through domains to ensure they arrive at base stations promptly for transmission to wireless users in the system of La Porta.

La Porta fails to teach means for triggering a transmission of a route update message from an access node.

Li teaches in column 3, lines 63-65, and column 6, lines 45-49, and in FIG. 1A, each cell or cluseter includes corresponding cluster member nodes 10 (FIG. 1A) with one of those cluster member nodes designated as a cleauster head node or a base

station 14 (FIG. 1A) (an access node), and where an event (e.g. change in network topology, external network connected to network 2, FIG. 1A, reception of a database update packet, etc.) triggers transmission of a database update packet by a node (means for triggering a transmission of a route update message from an access node). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Li with the invention of La Porta since Li shows an apparatus that transmits an update packet when an event occurs, allowing a device in the method of La Porta to send an update packet to other devices if forwarding a setup message alone does not update a sufficient number of devices in a domain, or if a user wants devices outside the devices that receive a setup message to also be updated with the same information.

La Porta fails to teach stateful IPv6 autoconfiguration.

Templin teaches in paragraphs [0039]-[0042] and [0308], nodes sending link-state updates to other nodes, and, in paragraphs [0271] and [0272], hosts and IPv6 routers receiving router advertisements and implementing auto-configuration (stateful IPv6 autoconfiguration). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Templin with the invention of La Porta since Templin provides a system of advertising link-states and topology information using autoconfiguration of IPv6 in a wireless environment, which can be incorporated into the wireless access of packet-based networks of the La Porta to allow the advanced implementation of IPv6 in updating information involved in handoffs, and one of ordinary skill in the art at the time of the invention would appreciate the

advantages of implementing IPv6 to allow global addressing and in updating the system of La Porta to be compatible with IPv6 addressing as IPv6 becomes more prevalent in networks and the Internet.

Claims 8, 9, 13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over La Porta in view of Hennessey, Li, Templin, and further in view of Heller.

In regards to Claim 8, as discussed in the rejection of Claim 7, La Porta in view of Hennessey, Li, and Templin teaches a means for revving, and a stateful IPv6 autoconfiguration message.

La Porta fails to teach a second access node, a second message that confirms an address acquires by a mobile node prior to accessing a second access node, a second access node adds its address to a second message.

Heller teaches in column 2, lines 4-5, an MN (mobile node) receives an IP address from an address assigning authority home network, such as an ISP, which includes a Mobile IP Home Agent (HA) and a server , and, in column 3, lines 60-67, an MN (mobile node) detects a BS and sends normal link layer messages to a BS (base station) identifying itself, a PMN (proxy mobile node) within a BS (base station) retrieves Mobile IP information from a database based on the identity of the MN, this information includes an IP address for each of the MN and other network elements needed to perform mobile IP registration, and a network further comprises a new base station (BS) and a new foreign agent (FA) provided at a new BS, and a new PMN (proxy mobile

node) is provided at a new BS (base station), and if a MN (mobile node) detects a new BS, it first sends normal link layer messages to the new BS identifying itself, and the new PMN within the new BS retrieves Mobile IP information from a data based on identity of the MN, where this information includes an IP address for each of the MN and other network elements needed to perform a new mobile IP registration (a second access node, a second message that confirms an address acquires by a mobile node prior to accessing a second access node, a second access node adds its address to a second message). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Heller with the invention of La Porta since Heller provides a system in which a mobile node can maintain a Mobile IP address even after moving between base stations (see Heller, column 2, lines 14-19), reducing overhead that is associated with allocating new IP addresses and reducing the processing burden of a mobile node, and one of ordinary skill in the art at the time of the invention would appreciate the advantage of maintaining an IP address in a network as a mobile devices moves between base stations in that it reduces the processing complexity of a mobile device and allows lower cost user devices and requires less overhead between a network and a user device as handoff occurs.

In regards to Claim 9, as discussed in the rejection of Claim 8, La Porta in view of Hennessey, Li, Templin, and Heller teaches a DHCP server and a stateful IPv6 autoconfiguration message.

La Porta further teaches in column 34, lines 41-43 and 54-55, and in FIG. 17, page 42, a mobile device handoff from one base station to another base station, which causes a mobile device to generate and transmit a setup message and routers to forward a path setup message for each handoff of the mobile device, as outlined in column 35, line 1 to column 36, line 25, and discussed above in the rejection of Claim 1, and, in column 36, lines 2-17, a root router, after receiving and processing a setup message that it is different from an earlier setup message, will update an entry associated with a mobile device (DHCP Server receives and analyses a second IP message comprising a second set of addresses capable of use for route maintenance from a mobile node through a second access node, and analyzing a second IP message to determine whether a second set of addresses are consistent with a first set of addresses).

In regards to Claim 13, as discussed in the rejection of Claim 8, La Porta in view of Hennessey, Li, Templin, and Heller teaches a DHCP server and a stateful IPv6 autoconfiguration message, route maintenance information and first IP message, and, as discussed in the rejection of Claim 9, a second IP message.

La Porta further teaches in column 9, lines 40-47, a memory residing in a root router (memory element operably coupled to a processor and containing a router table for storing maintenance information extracted from IP message).

In regards to Claim 17, as discussed in the rejection of Claim 8, La Porta in view of Hennessey, Li, Templin, and Heller teaches a data communications network and a first access node, and, as discussed in the rejection of Claim 9, La Porta teaches a second access node. La Porta further teaches in column 5, lines 43-48 and 51-54, Mobile IP wireless access for Internet Protocol (IP)-based network of mobile devices, and, in column 35, lines 1-8, 26-31, and 46-53, and in FIG. 17, page 42, a base station item BS11 receives a path setup message from a mobile device (item 114, FIG. 17) (wireless access media communication link to facilitate a wireless link).

Claims 10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over La Porta in view of Hennessey, Li, Templin, Heller, and further in view of Shitama.

In regards to Claim 10, as discussed in the rejection of Claim 8, La Porta in view of Hennessey, Li, Templin, and Heller teaches a DHCP Server, a processor, a first access node, a second access node, triggering a route update message to an access node in response to a determination, and address information used for route maintenance to a mobile node.

La Porta fails to teach triggering a route update message to an access node to delete obsolete information.

Shitama teaches in column 5, lines 37-44, a routing update message that may cause a router to delete an entry for a mobile node in a routing table when a mobile node moves between subnetworks in a domain or different domains (a deletion message that instructs in deleting obsolete information). It would have been obvious to

one of ordinary skill in the art at the time of the invention to combine the invention of Shitama with the invention of La Porta since Shitama shows a system where a node can send a deletion message to a router to delete an entry, and can allow a root router in the method of La Porta to delete entries in routers if they have become obsolete and a setup message failed to reach the routers.

In regards to Claim 16, as discussed in the rejection of Claim 8, La Porta in view of Hennessey, Li, Templin, and Heller teaches a data communications network includes a first access node, and a number of routers located between an access node and a DHCP Server, and, as discussed in the rejection of Claim 9, La Porta teaches a second access node.

La Porta fails to teach a tree-type topology.

Shitama teaches in column 10, lines 51-53, and in FIG. 16, Sheet 14 of 23, a domain (item 24) that form a tree with a border router (item 23) as a root (a tree-type topology). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Shitama with the invention of La Porta since Shitama shows a tree topology for a domain, which can be used to provide a topology in the method of La Porta to provide efficient message forwarding and efficient monitoring of network activity.

Claim 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over La Porta in view of Hennessey, Li, Templin, Heller, and further in view of Immonen.

In regards to Claim 12, as discussed in the rejection of Claim 8, La Porta in view of Hennessey, Li, Templin, Heller teaches a first IP message, and, as discussed in the rejection of Claim 9, La Porta in view of Hennessey, Li, Templin, Heller teaches a second IP message.

La Porta fails to teach an IPv6 stateful autoconfiguration 'CONFIRM' message.

Immonen teaches in column 21, lines 16-19, IPv6 packets (IPv6 messages).

Immonen teaches in column 31, lines 25-28, acquiring an Ipv6 address involves a stateful address autoconfiguration, i.e. DHCPv6, and, in column 23, lines 52-53, a confirmation message (stateful autoconfiguration "CONFIRM" message). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Immonen with the invention of La Porta since Immonen shows a system specifically implementing stateful address autoconfiguration for assigning Ipv6 addresses, and can be incorporated into the method of La Porta to update the method of La Porta so that it is compatible with the emerging Ipv6 and allows the DHCP components of La Porta to utilize DHCPv6.

In regards to Claim 15, as discussed in the rejection of Claim 8, La Porta in view of Hennessey, Li, Templin, Heller teaches a first access node and access router.

La Porta further teaches in column 20, lines 39-43, assuming a DHCP server is co-located at a root router, then a base station will act as a DHCP server relay (access router collocated with relay functions).

La Porta fails to teach DHCPv6 functions. Immonen teaches these limitations.

Immonen further teaches in column 31, lines 25-28, DHCPv6 (DHCPv6 functions). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Immonen with the invention of La Porta since Immonen shows a system specifically implementing stateful address autoconfiguration for assigning Ipv6 addresses, and can be incorporated into the method of La Porta to update the method of La Porta so that it is compatible with the emerging Ipv6 and allows the DHCP components of La Porta to utilize DHCPv6.

Response to Arguments

I. Arguments for Claim Rejection under 35 U.S.C. § 112.

Applicant's arguments, see page 9, filed 01/15/2009, with respect to Claims 1-6 have been fully considered and are persuasive. The rejection of Claims 1-6 has been withdrawn.

II. Arguments for Claim Rejection under 35 U.S.C. § 103.

Applicant's arguments with respect to claims 1-10, 12, 13 and 15-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSHUA SMITH whose telephone number is (571)270-

1826. The examiner can normally be reached on Monday-Thursday 9:30am-7pm, Alternating Fridays 9:30am-6pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joshua Smith
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Patent Examiner
23 March 2009

/Hassan Kizou/
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